TASK ORDER (TO)

47QFCA22F0051

Modification P00002

Sentinel

in support of:

National Security Innovation Network (NSIN)

Awarded to:
Leidos, Inc. under the General Services Administration (GSA) One Acquisition Solution for Integrated Services (OASIS) Multiple Award (MA) Indefinite Delivery/Indefinite Quantity (IDIQ) – Unrestricted Pool 1 Contract
GS00Q140ADU122

Conducted under Federal Acquisition Regulation (FAR) 16.505

Awarded by:
The Federal Systems Integration and Management Center (FEDSIM)
1800 F Street, NW (QF0B)
Washington, D.C. 20405

Award Date: September 14, 2022

Modification Date: January 23, 2022
FEDSIM Project Number 47QFCA22Z0063/DE01181

C.1 BACKGROUND

The National Security Innovation Network (NSIN) is a U.S. Department of Defense (DoD) program office under the Under Secretary of Defense for Research and Engineering that seeks to create new communities of innovators to solve national security problems. NSIN partners with national research universities and the venture community to reinvigorate civil-military technology collaboration. As opposed to making investments in specific technologies, Government research and development programs, or startups, NSIN focuses on human capital innovation (i.e., developing and enabling innovators and human-centered networks to solve national security problems). In support of this mission, NSIN provides tools, training, and access to DoD assets that enable entrepreneurs and intrapreneurs to develop and commercialize high-potential products in the national interest.

NSIN addresses complex national security problems by helping solution providers better connect with the defense industry marketplace. NSIN leads the development of hundreds of innovative projects that require access to both traditional and non-traditional suppliers. NSIN consists of a portfolio of programs designed to build a defense innovation workforce that creates ventures relevant to both national security and high-potential civilian applications. These programs are organized in three broad categories: national service, collaboration, and acceleration.

a. National Service Portfolio: creates new opportunities for national security service for those who might not otherwise participate in national security innovation.
b. Collaboration Portfolio: connects innovators inside and outside of the DoD to solve national security problems.
c. Acceleration Portfolio: provides funding, prototyping, and infrastructure resources needed to translate high-potential concepts into minimum viable products or prototypes.

Headquartered in Arlington, Virginia (VA), NSIN has 11 regions throughout the U.S. to provide an organizational and management construct for the execution of its work. Each region includes a hub city representing the most significant proximity to a concentration of DoD customers and partners, academic partners and Tier 1 research institutions, and a robust commercial innovation/venture ecosystem with which to engage.

In partnership with the FEDSIM, NSIN is tackling the technological and operational challenges faced by the DoD and Intelligence Community (IC) with respect to Intelligence, Surveillance, and Reconnaissance (ISR).

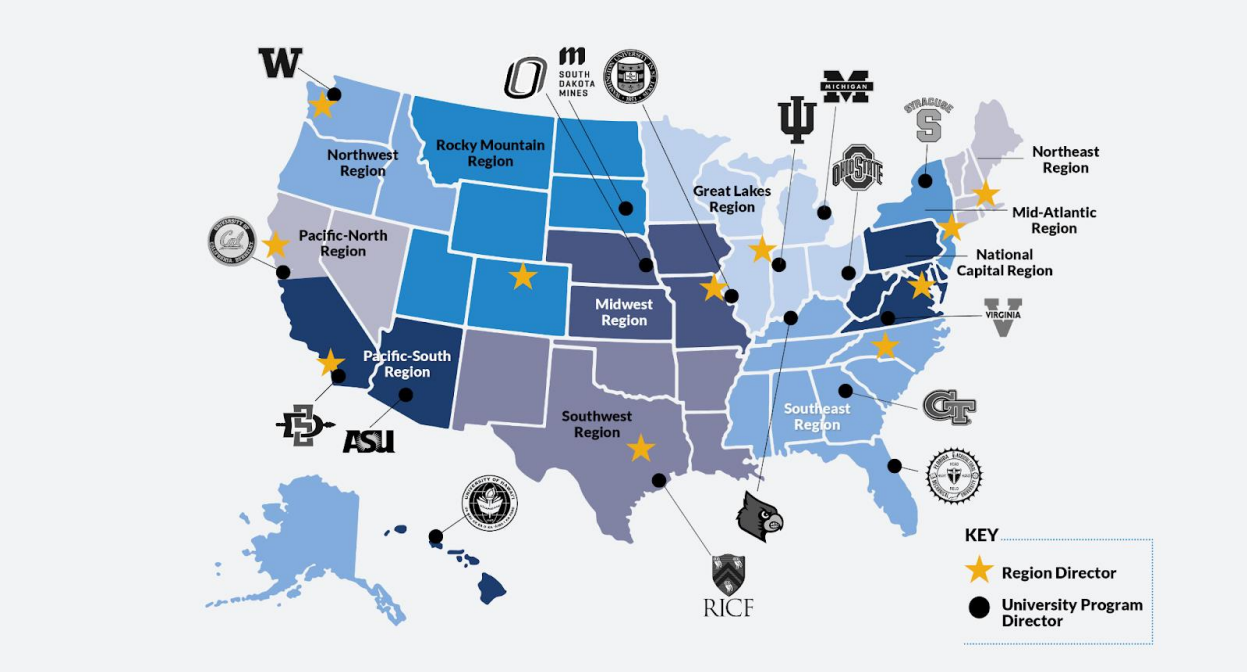

Figure: NSIN Regions and Locations

C.1.1 PURPOSE

This purpose of this TO is to enhance NSIN and its mission partners' operational Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) capabilities by providing a scalable, comprehensive, project-based contract solution that addresses initial fielding and operation, logistics, maintenance, sustainment, and training. The contractor shall provide highly skilled labor, materials and equipment, training, and other critical assets that enable the development of ISR products and capabilities in support of national interests.

NSIN and its mission partners' priorities are heavily contingent on activity that is primarily driven by war, terrorism, and threat situations that can change depending on the nature of intelligence received. As NSIN mission partners are presented with emerging problem sets, NSIN will be utilized as the solution provider for the contractor-provided services under this TO. As the global threat environment shifts, ISR mission needs and priorities shift, resulting in a change to requirements to which the contractor must adapt. To manage this, the Government will utilize TDLs to organize and track individual in-scope projects under this TO.

C.1.2 AGENCY MISSION

NSIN is a program office within the Office of the Under Secretary of Defense for Research and Engineering, with a mission to build communities of innovators to generate new solutions to national security problems. NSIN develops programs that are designed to help other DoD entities from the military services, joint staff, Combatant Commands (CCMDs), and defense agencies and field activities solve problems with non-traditional partners from the early-stage venture

community and academia. NSIN is organized around three core lines of effort. These lines of effort include:

a. Creating New Opportunities for National Security Service by building models of service that account for generational and cultural differences between the military, academic, and venture communities and providing flexible pathways to official service within the DoD.
b. Solving National Security Problems by Collaborating with Partners from the Academic and Venture Communities by engaging new problem solvers in collision events with DoD customers that generate novel concepts and solutions and building a national network of problem-solving ecosystems that leverage the competitive advantages of regions and commercial innovation hubs for DoD customers.
c. Accelerating the Adoption of Novel Concepts and Solutions by facilitating engagement with DoD end users and transition partners to stimulate dual-use venture growth and improving Technology Transfer and Transition (T3) rates for DoD Lab technology through dual-use commercialization via early-stage ventures.

C.2 SCOPE

The scope of this TO includes providing NSIN and its mission partners with C5ISR solutions. This effort will provide research, design, development, integration, T&E, initial fielding and operation, logistics, maintenance, sustainment, and training for applicable C5ISR systems, subsystems, sensors, Processing, Exploitation, and Dissemination (PED) capabilities. NSIN's mission partners include DoD CCMDs, attached and supporting services, interagency partners (e.g., Director of National Intelligence (DNI), DoS, and Department of Homeland Security (DHS)), and DoD offices and agencies. Purchasing weapons systems is not within scope of this TO. Use of weapons systems, other than as it relates to the analytical and technical services described in **Section C**, is not within scope of this requirement.

C.3 CURRENT ENVIRONMENT

The National Security Strategy (NSS) and the National Defense Strategy (NDS) note that the global strategic environment is characterized primarily by competition between the U.S. and ascending near-peer nations. This competition is marked by these near-peer nations' malign activities occurring below the threshold of armed conflict while they and other competitors have simultaneously fielded warfighting capabilities with increased lethality, range, and speed. U.S. forces have used operationally important ISR assets, tools, training, and the development and commercialization of high-potential ISR products as an advantage in the competition with these near-peer and other adversary forces.

The most important role of intelligence in military operations is providing commanders with analysis of key aspects of the operational environment to assist with the decision-making process. Using a wide variety of capabilities, ranging from above the earth's atmosphere to below the surface of the ocean, ISR sensors collect data on a given area of operations or battlespace in support of a commander's information needs. Such needs may include the location of adversary forces, its warfighting capability, and its intentions. The collected data resulting from multiple sources are then analyzed, largely by human operators with support from Artificial Intelligence (AI) and transformed into information. This information allows friendly forces to

understand adversary intentions and capabilities within the battlespace, and it supports the commander's decision-making process. Furthermore, during the execution of real-time combat operations and in accordance with the direction provided by a commanding officer, ISR provides both targeting data for weapon systems to engage enemy forces and threat data to protect forces. Therefore, NSIN and its mission partners' priorities are highly aligned with activity that is primarily driven by war, terrorism, and the actions of adversary forces.

ISR is a very broad set of capabilities using a wide variety of platforms (e.g., satellites, aircraft, ships, and humans) and sensors (e.g., imagery, communications, acoustics) to collect, analyze, and share data, information, and intelligence across multiple warfighting domains (see diagram below). The focus of ISR is on answering a commander's information needs. Specific intelligence disciplines include, but are not limited to, Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), Measurement and Signature Intelligence (MASINT), Publicly Available Information (PAI), and Human Intelligence (HUMINT).

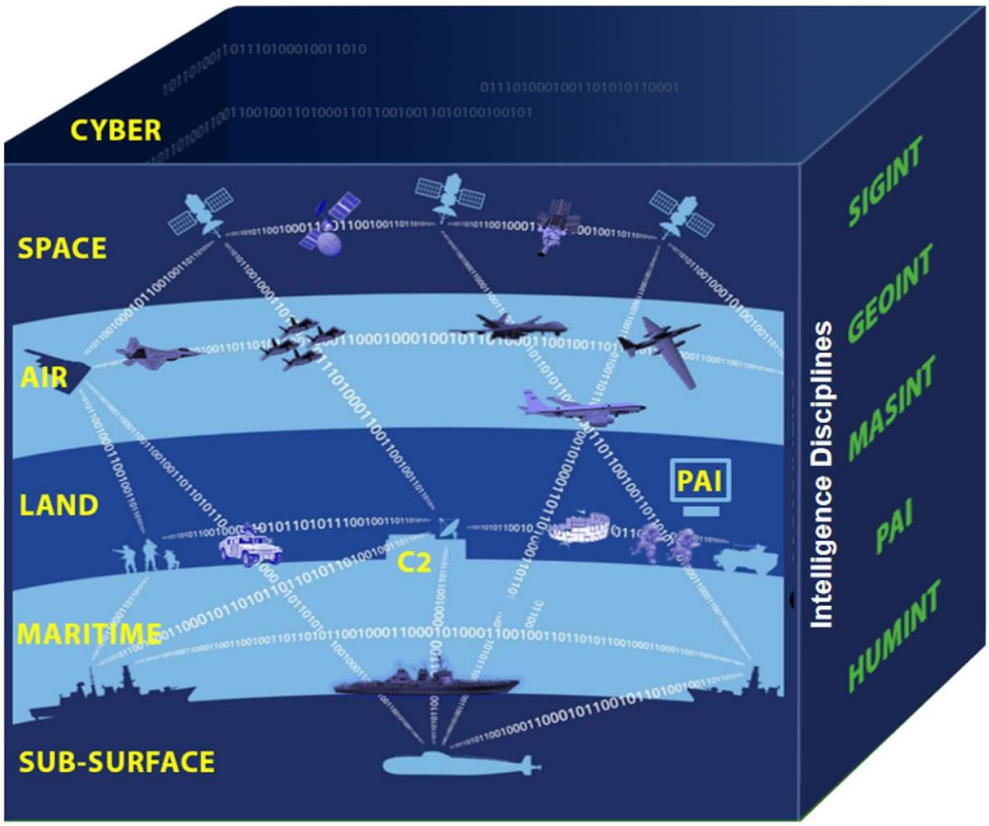

Figure: ISR Domains and Intelligence Disciplines

C.4 OBJECTIVE

The objective of the Sentinel TO is to provide NSIN and its DoD and interagency partners with C5ISR research, development, and integration of developed capabilities and initial operational fielding and support, including PED. The Sentinel TO will provide cost-effective identification, design and development, integration, T&E, operations, maintenance, and training for a mix of C5ISR platforms, systems, subsystems, and sensors. The Sentinel TO will support 20 to 50

projects each year from multiple and disparate mission partners. The use of a single contract to meet these requirements will facilitate coordination of work on these efforts to ensure compatibility and resource leveraging when possible.

C.5 TASKS

The contractor shall provide support for the tasks and subtasks, in a variety of domains such as air, land, maritime, and cyberspace to support all of NSIN's strategic partners. Specific tasks are:

a. Task 1 – Provide TO Management
b. Task 2 – Provide C5ISR Solutions
c. Task 3 – Provide Operations, Intelligence Analysis, and PED
d. Task 4 – Provide Training
e. Task 5 – Provide Cyber Security and Information Assurance (IA) Support

C.5.1 TASK 1 – PROVIDE TASK ORDER (TO) MANAGEMENT

The contractor shall provide program management support under this TO. This includes the management and oversight of all activities performed by contractor personnel, including subcontractors, to satisfy the requirements identified in this Performance Work Statement (PWS).

The contractor's TO governance structure shall be scalable to effectively support a multi-tenant environment, which is defined as multiple Government entities with the need to separately track project management and contract elements such as requirements, deliverables, costs, and ceiling. The contractor shall use a Work Breakdown Structure (WBS), a component of the Project Management Plan (PMP), during the performance of all projects. During the life of the TO, the Government will require varying levels of support on behalf of NSIN and its mission partners.

The Government will utilize the term TDL to identify and track specific projects in support of NSIN Mission Partner operational support needs. The Government anticipates issuing a range of TDLs on an annual basis and initiating TDLs at varying times within a Period of Performance that consist of various appropriation types (e.g., one-year, two-year, no-year, etc.) depending on the bona fide need. These efforts can be severable or non-severable in nature, further impacting the contractor's level of project and financial tracking required to ensure that the Government maximizes the availability of funds. The Government will include the severability designation in the request for support.

C.5.1.1 SUBTASK 1.1 – COORDINATE A PROJECT KICK-OFF MEETING

The contractor shall schedule, coordinate, and host a Project Kick-Off Meeting at the location approved by the Government (**Section F, Deliverable 01**). The meeting shall provide an introduction between the contractor personnel and Government personnel who will be involved with the TO. The meeting shall provide the opportunity to discuss technical, management, and security issues, and travel authorization and reporting procedures. At a minimum, the attendees shall include the contractor's Key Personnel, the NSIN Technical Point of Contact (TPOC), other relevant Government personnel, the FEDSIM CO, and the FEDSIM COR.

At least three days prior to the Project Kick-Off Meeting, the contractor shall provide a Project Kick-Off Meeting Agenda (**Section F, Deliverable 02**) for review and approval by the FEDSIM COR and the NSIN TPOC prior to finalizing. The agenda shall include, at a minimum, the following topics/deliverables:

a. Points of Contact (POCs) for all parties.
b. Program management discussion including schedule, and tasks.
c. Personnel discussion (e.g., roles and responsibilities and lines of communication between contractor and Government).
d. Project Staffing Plan and status.
e. Transition-In Plan (**Section F, Deliverable 11**) and discussion.
f. Security discussion and requirements (e.g., building access, badges, Common Access Cards (CACs)).
g. Financial reporting and invoicing requirements.
h. Quality Management Plan (QMP) (**Section F, Deliverable10**).
i. Operations Security (OPSEC) Plan (**Section F, Deliverable 04**).
j. The TDL process.
k. The Award Fee process (**Section J, Attachment D**)
l. The TO Management Portal (**Section C.5.1.10**).

The Government will provide the contractor with the number of Government participants for the Project Kick-Off Meeting, and the contractor shall provide copies of the presentation for all present.

The contractor shall draft and provide a Project Kick-Off Meeting Minutes Report (**Section F, Deliverable 03**), documenting the Project Kick-Off Meeting discussion and capturing any action items.

C.5.1.2 SUBTASK 1.2 – PREPARE A MONTHLY STATUS REPORT (MSR)

The contractor shall develop and provide an MSR (**Section J, Attachment F and Section F, Deliverable 05**). The MSR shall include the following:

a. Activities during the reporting period, by TDL (include ongoing activities, new activities, activities completed, and progress to date on all above-mentioned activities). Each section shall start with a brief description of the task.
b. Problems and corrective actions taken. Also include issues or concerns and proposed resolutions to address them.
c. Personnel gains, losses, and status (security clearance, etc.).
d. Government actions required.
e. Schedule (show major tasks, milestones, and deliverables; planned and actual start and completion dates for each).
f. Summary of trips taken, conferences attended, etc. (attach Trip Reports to the MSR for the reporting period).
g. Cost incurred by CLIN.

h. Accumulated invoiced cost for each CLIN up to the previous month.
i. Projected cost of each CLIN for the current month.

C.5.1.3 SUBTASK 1.3 – CONVENE TECHNICAL STATUS MEETINGS

The contractor Program Manager (PM) shall convene a monthly Technical Status Meeting with the NSIN TPOC, FEDSIM COR, and other Government stakeholders (**Section F, Deliverable 06**). The purpose of this meeting is to ensure all stakeholders are informed of the monthly activities and MSR, provide opportunities to identify other activities and establish priorities, and coordinate resolution of identified problems or opportunities. The contractor PM shall provide minutes of these meetings, including attendance, issues discussed, decisions made, and action items assigned, to the FEDSIM COR (**Section F, Deliverable 07**).

C.5.1.4 SUBTASK 1.4 – PREPARE AND UPDATE A PROJECT MANAGEMENT PLAN (PMP)

The contractor shall document all support requirements in a PMP and shall provide it to the Government (**Section F, Deliverable 08**).

The PMP shall:

a. Describe the proposed management approach.
b. Contain detailed Standard Operating Procedures (SOPs) for all tasks.
c. Include milestones, tasks, and subtasks required in this TO.
d. Provide for an overall WBS with a minimum of three levels and associated responsibilities and partnerships between Government organizations.
e. Describe in detail the contractor's approach to risk management under this TO.
f. Describe in detail the contractor's approach to communications, including processes, procedures, format, and other rules of engagement between the contractor and the Government.
g. Include the contractor's QMP.
h. Include subcontractor management.

The PMP is an evolutionary document that shall be updated annually at a minimum and as project changes occur. The contractor shall work from the latest Government-approved version of the PMP.

C.5.1.5 SUBTASK 1.5 – PREPARE TRIP REPORTS

The Government will identify the need for a Trip Report when the request for travel is submitted (**Section F, Deliverable 09**). The contractor shall keep a summary of all long-distance travel including, but not limited to, the name of the employee, location of travel, duration of trip, and POC at travel location. Trip reports shall also contain Government approval authority, total cost of the trip, a detailed description of the purpose of the trip, and any knowledge gained. At a minimum, Trip Reports shall be prepared with the information provided in **Section J, Attachment G**.

C.5.1.6 SUBTASK 1.6 – PROVIDE QUALITY MANAGEMENT

The contractor shall identify and implement its approach for providing and ensuring quality throughout its solution to meet the requirements of the TO. The contractor shall provide a QMP and maintain and update it as changes in the program processes are identified (**Section F, Deliverable 10**). The contractor's QMP shall describe the application of the appropriate methodology (i.e., quality control and/or quality assurance) for accomplishing TO performance expectations and objectives. The QMP shall describe how the appropriate methodology integrates with the Government's requirements.

C.5.1.7 SUBTASK 1.7 – TRANSITION-IN

The contractor shall provide a Transition-In Plan (**Section F, Deliverable 11**) as required in **Section F.** The contractor shall ensure that there will be minimum service disruption to vital Government business and no service degradation during and after transition. The contractor shall implement its Transition-In Plan No Later Than (NLT) ten calendar days after award, and all transition activities shall be completed 90 calendar days after Project Start (PS). In the Transition-In Plan, the contractor shall identify how it will coordinate and manage the following:

a. TO management processes.
b. Transition of Key Personnel roles and responsibilities.
c. TDL readiness.
d. Resourcing strategy for materials, equipment and ODCs.
e. Transition-in schedule and milestones.
f. Actions required of the Government.
g. Stakeholder coordination and communication.
h. Achieving Full Operational Capability, meaning the ability to provide all necessary personnel, tools and ODCs, and also start work on TDLs received from the Government.

C.5.1.8 SUBTASK 1.8 – TRANSITION-OUT

The contractor shall provide transition-out support when required by the Government. The Transition-Out Plan shall facilitate the accomplishment of a seamless transition from the incumbent to incoming contractor/Government personnel at the expiration of the TO. The contractor shall provide a Transition-Out Plan within six months of PS (**Section F, Deliverable 12**). The contractor shall review and update the Transition-Out Plan in accordance with the specifications in **Sections E and F**.

In the Transition-Out Plan, the contractor shall identify how it will coordinate with the incoming contractor and/or Government personnel to transfer knowledge regarding the following:

a. Project management processes.
b. POCs.
c. Location of technical and project management documentation.
d. Status of ongoing technical initiatives.
e. Appropriate contractor-to-contractor coordination to ensure a seamless transition.

f. Transition of Key Personnel roles and responsibilities.
g. Schedules and milestones.
h. Actions required of the Government.

The contractor shall also establish and maintain effective communication with the incoming contractor/Government personnel for the period of the transition via weekly status meetings or as often as necessary to ensure a seamless transition-out.

The contractor shall implement its Transition-Out Plan NLT six months prior to expiration of the TO.

C.5.1.9 SUBTASK 1.9 – PROVIDE A TECHNICAL DIRECTION PLAN (TDP)

This will be a project based TO with multiple projects operating concurrently among mission partners.

The contractor shall provide a TDP (**Section F, Deliverable 14**) in response to the FEDSIM CO-approved TDL per Section H.20 within 15 calendar days after TDL approval. The contractor shall tailor the requirements of each TDP to match the complexity of the project requirements. The TDPs are evolutionary documents and shall be updated as necessary during the execution of the TDLs. The contractor shall work from the latest FEDSIM CO-approved version of the TDP.

At a minimum, each TDP shall include the following:

a. Summary of the Government's requirements that includes, at a minimum, the project specifications, deliverable characteristics, structure, activities, applicable regulatory policies and procedures, conditions, risks, and risk mitigations, from project inception through project closeout. All project milestones shall be detailed with clear, unambiguous target dates.
b. An initial schedule submission that is updated on a monthly basis, at minimum. Actual start dates from the baseline version shall be tracked and percent of work complete shall be monitored and reported in the process of schedule management.
c. Project Kick-Off Meeting including transition-in and technical approach discussion.
d. Project-level technical status meetings.
e. PMP including supervision and execution of the work as well as tracking and managing cost, performance, and schedule. Where applicable, the plan shall specifically address management of subcontractors, risks, procurement, and logistics.
f. Travel and ODC considerations.
g. Security considerations.
h. Detailed project cost estimate broken out by CLIN.

Once the TDP has been approved by the FEDSIM CO and FEDSIM COR, the contractor shall schedule and coordinate a TDP Project Kick-Off Meeting at a location approved by the Government. Project Kick-Off Meetings may be held virtually pending approval from the FEDSIM COR. The meeting will provide an introduction between the contractor personnel and Government personnel who will be involved with the project. The meeting will provide the Government and the contractor with an opportunity to discuss technical, management, and security issues as well as other TO processes and procedures. At a minimum, the attendees shall

include the contractor PM, relevant Government representatives, the NSIN TPOC, and the FEDSIM COR.

Prior to the TDP Kick-Off Meeting, the contractor shall provide a TDP Kick-Off Meeting Agenda. The agenda shall include, at a minimum, the following topics:

a. Introduction of team members and personnel including roles, responsibilities, and lines of communication between the contractor and the Government.
b. Discussion of the TDL requirements.
c. Discussion of the cost estimate.
d. Discussion of staffing and status.

The contractor shall draft and provide TDP Kick-Off Meeting Minutes documenting the TDP Kick-Off Meeting discussion and capturing any action items. The contractor shall host a TDP Kick-Off Meeting for each approved TDP and shall provide a meeting agenda and meeting minutes (**Section F, Deliverables 15 and 16**).

If there is a conflict between the TDP and the TO, the TO shall always take precedence. The FEDSIM CO will approve all changes.

C.5.1.10 SUBTASK 1.10 – IMPLEMENT A TASK ORDER (TO) MANAGEMENT PORTAL

The objective of the TO management portal is to introduce efficiencies and streamline the flow of TO information in addition to providing a central location for the Government and contractor to access management-level information regarding the status of TO activities.

The contractor shall implement and maintain a secure, web-based portal capability certified up to Controlled Unclassified Information (CUI) that provides program management views/reporting, tracks metrics, and stores artifacts at the unclassified level. Government-approved contractor personnel and Government personnel shall have access to the portal worldwide. The portal content shall be maintained and revised throughout the duration of the TO. The contractor shall implement cybersecurity best practices to protect the portal system and data contained within the portal.

At a minimum, the portal shall provide the following:

a. Multi-Factor Authentication (MFA) and secure logical access controls with user role-based views.
b. A dashboard that identifies each TO TDL:
    1. Customer POC and entity.
    2. Lead contractor POC information.
    3. Project duration.
    4. Applicable schedule information.
    5. Allocated budget by CLIN.
    6. Funded amount by CLIN.
    7. Incurred cost amount by CLIN.
    8. Invoiced amount, invoice number, and date(s).

c. A staffing roster inclusive of name, TDL, functional role, location, and clearance level.
d. An automated workflow for Government review/approval of Requests to Initiate Purchase (RIPs)/Consents to Purchase (CTPs), Travel Authorization Requests (TARs), deliverables, and TDLs, inclusive of the NSIN TPOC and FEDSIM COR.
e. An organized document library to store management-related deliverables (e.g., monthly reports, meeting minutes, financial reports, PMP, TO deliverables).
f. Risk management information, including identification of risks, severity, and extent, identification of security tool effectiveness, and risk-based prioritization of efforts.
g. Lessons learned database to assist with process improvement projects.

The contractor shall deliver a proposed portal solution at the Project Kick-Off Meeting (**Section F, Deliverable 13**) for approval from the FEDSIM COR. The contractor shall implement and have its portal solution fully operational by 90 calendar days after the TO base year start date (**Section F, Deliverable 17**). The portal capabilities are expected to evolve and adapt to meet the mission needs of the Government.

C.5.1.11 SUBTASK 11 – ACCOUNTING FOR SERVICE CONTRACT REPORTING

The contractor shall report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this TO. The contractor shall completely fill in all required data fields using the following web address: http://www.sam.gov.

Reporting inputs will be for the labor executed during the period of performance during each Government Fiscal Year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported NLT October 31 of each calendar year. Contractors may direct questions to the support desk at: http://www.sam.gov.

C.5.2 TASK 2 – PROVIDE COMMAND, CONTROL, COMPUTERS, COMMUNICATIONS, CYBER, INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (C5ISR) SOLUTIONS

The contractor shall provide the appropriate combination of C5ISR solutions, which includes engineering services, platforms, vehicles, sensors, systems, ancillary equipment, and support personnel for this task. For both manned and unmanned systems, the support provided shall be performed within one or more domains as needed, to include airborne, ground, maritime, near-space, space, and/or cyberspace.

C.5.2.1 SUBTASK 2.1 – PROVIDE SUPPORT FOR REQUIREMENTS, CAPABILITY ANALYSIS, AND EVALUATION

The contractor shall conduct research, analysis, and evaluation of current and future C5ISR capabilities, requirements recommendations, deployments, and integration, to include:

a. C5ISR advanced concepts, capabilities, and technologies, including emerging technology, Commercial Off-the-Shelf (COTS), and Government Off-the-Shelf (GOTS).
b. System and subsystem platform capabilities and limitations.
c. Analysis of system and subsystem designs.

d. Analysis of target detection, characterization, and classification methodologies.
e. Analysis of PED and associated capabilities and processes.
f. Analysis of cybersecurity and IA.
g. Analysis of existing systems and platforms for use in response to Government requirements.

The contractor shall analyze mission needs statements, requirements concepts, integration and interoperability of selected technologies, systems, services, standards, and combinations thereof in order to identify potential design changes to legacy and emerging systems that may provide operational effectiveness and efficiency benefits. These findings shall be documented in a Systems Requirements Report (**Section F, Deliverable 18**). In support of cost-benefit analysis, the contractor shall support red teaming and war-gaming simulations, as well conduct modeling and simulation at the strategic, operational, tactical, and systems levels (such as with the Integrated Threat Analysis and Simulation Environment (ITASE)). This analysis includes Live, Virtual, and Constructive (LVC) exercises and analysis.

The contractor shall develop Joint Capabilities Integration and Development System (JCIDS)-based requirements documents in support of acquisition milestone decisions for Government review and approval, and to support development of system life-cycle cost funding requirements. The contractor shall develop a Strategic Transition Plan (**Section F, Deliverable 19**) in support of service Planning, Programming, Budgeting and Execution (PPBE) activities and Program Objective Memorandum (POM) submissions. The contractor shall support development of responses to Congressional inquiries.

The contractor shall provide a C5ISR Innovation Recommendation Report (**Section F, Deliverable 20**). This document shall provide an Analysis of Alternatives (AoA) and make recommendations to the Government to support the design, development, and configuration of C5ISR systems, subsystems, associated equipment, and programs as well as evaluate the effectiveness, efficiency, suitability, and applicability with respect to operational scenarios. These recommendations shall address critical factors such as spectrum operations in a contested environment, human factors, capabilities of the newest sensor technologies, and operational reliability.

The contractor shall identify, exploit, and configure current and emerging C5ISR technologies, including sensor technology, Big Data system technology insertion initiatives, as well as AI and Machine Learning (ML). The contractor shall provide a Strategic Concept Development Report (**Section F, Deliverable 21**) that provides technical recommendations to the Government for the implementation and development of enhancements supporting strategic concepts.

C.5.2.2 SUBTASK 2.2 – PROVIDE DESIGN AND DEVELOPMENT

The contractor shall design and develop C5ISR subsystems and sensors, and associated systems (e.g., PED, cybersecurity) and shall capture the detailed designs in a C5ISR Systems Design Report (**Section F, Deliverable 22**). As applicable, the contractor shall develop software (**Section F, Deliverable 61),** Application Program Interfaces (APIs) and provide Interface Control Documents (ICDs) (**Section F, Deliverable 23**). The contractor shall deliver modernized equipment technical documentation, which shall include Engineering Drawings (**Section F, Deliverable 24**), Software Development Plans (**Section F, Deliverable 25**), and Technical Data

Packages (**Section F, Deliverable 26**). The contractor shall provide alternatives to allow for examination of trade-offs in risk areas, and document trade-offs in a Risk Trade-Off Report (**Section F, Deliverable 27**).

The contractor shall develop analysis verification and validation documentation that supports analysis of designed and developed C5ISR systems. The contractor shall develop a Joint Systems Architecture that distributes data so that it contains no single point of failure and may replicate data to a number of nodes across multiple data centers (**Section F, Deliverable 28**). This architecture shall enable a next generation C5ISR enterprise that will enable the Government to provide novel enterprise services (e.g., AI, ML) for a wide range of domains, disciplines, and against threats globally.

The contractor shall develop System Concept of Operations (CONOPS) (**Section F, Deliverable 29**) and technical testing approaches for representative and operational testing purposes. The CONOPS shall address specific requirements, specifications, GFP, Contractor-Furnished Equipment (CFE), GOTS hardware and software, COTS hardware and software, and fabricated integration components.

C.5.2.3 SUBTASK 2.3 – PROVIDE INTEGRATION, TEST, AND EVALUATION

The contractor shall conduct integration, testing, and evaluation of C5ISR solutions to include existing systems being upgraded for obsolescence or enhancement, newly developed subsystems and/or systems based on mature technology, and/or newly developed systems and/or subsystems with next generation technology.

The contractor shall prototype and integrate ISR sensors, communications, cyber, and PED systems. The contractor shall perform installation, integration, and operation check for all subsystems and sensors. The contractor shall implement approaches to improve data communications and rapid dissemination of critical information. The contractor shall integrate information from single or multiple sources with related information that enables the Government and/or contractor to evaluate the integrity of the information. The contractor shall integrate network transmission capabilities across air, land, sea, and space platforms and shall provide applicable analysis in a Systems Integration Analysis Report (**Section F, Deliverable 30**).

The contractor shall analyze anomalies and update, integrate, test, and deliver corrections to ensure capabilities are not degraded. The contractor shall develop Test Plans (**Section F, Deliverable 31**) and Test Reports (**Section F, Deliverable 32**) describing testing conducted as well as evaluation of the test results. Test results will be provided to the Government for the Government's evaluation of suitability and effectiveness. When required, the contractor shall provide recommendations based on test results. The outputs of these tests include, but are not limited to:

a. Demonstrating that the engineering design and development process is complete.
b. Demonstrating that the design risks have been minimized.
c. Demonstrating that the system will meet specifications.
d. Estimating the system's military utility when fielded.

e. Determining whether the engineering design is supportable (e.g., practical, maintainable, safe) for operational use.
f. Providing test data with which to examine and evaluate trade-offs against specification requirements, life-cycle cost, and schedule.
g. Performing the logistics testing efforts to evaluate the achievement of supportability goals.

C.5.2.4 SUBTASK 2.4 – PROVIDE C5ISR SYSTEMS FOR DEPLOYMENT AND OPERATIONS

The contractor shall provide integrated C5ISR systems for deployment, operation, and maintenance, including equipment necessary for PED. The contractor shall configure C5ISR systems to meet Government mission requirements and coordinate all necessary certifications for operations.

The contractor shall provide all substantiation data necessary to obtain platform certifications based on current DoD requirements. The applicable certifications and/or processes will be defined by the Government, per TDL, to define the exit criteria for the applicable solution (e.g., terrestrial, maritime surface, underwater, air, near-space, space, and cyber space).

For airborne solutions, the contractor shall develop an Airworthiness Qualification Specification (AQS) (**Section F, Deliverable 33**) for each modified airborne system to document the approach to satisfy the explicit requirements of the Air Qualification Plan (AQP) (**Section F, Deliverable 34**). The AQS shall address the contractor's plan to provide a DoD airworthiness certification with the results of testing, analyses, demonstrations, documentation, and Federal Aviation Administration (FAA) Part 23 certification data as described in the AQP. Additionally, the AQS shall define the qualification methods for modified systems (i.e., similarity, analysis, testing, and demonstration). The contractor shall leverage data from previous FAA certification and DoD airworthiness qualification efforts, when adequate for AQP compliance, to reduce the scope of the modified system testing.

The contractor shall provide a Configuration Certification Plan (CCP) (**Section F, Deliverable 35**) and Technical Data Package (**Section F, Deliverable 26**) as required.

C.5.3 TASK 3 – PROVIDE OPERATIONS, INTELLIGENCE ANALYSIS, AND PROCESSING, EXPLOITATION, AND DISSEMINATION (PED)

The contractor shall operate and support C5ISR platforms, systems, PED, and ancillary equipment to gather intelligence data from multiple sources. The contractor shall refine and integrate this data into intelligence assessments and then disseminate it to support decision making by the data consumers. The contractor shall augment data collection with AI, ML, and Intelligence capabilities to provide more rapid and accurate assessments.

C.5.3.1 SUBTASK 3.1 – C5ISR SOLUTIONS OPERATIONS

The contractor shall provide all personnel, equipment, supplies, facilities, transportation, materials, limited security, and other items and non-personal services necessary to perform safe, routine, and emergency C5ISR platform operations and logistics in the Continental United States (CONUS), OCONUS, and deployed forward environments. This support shall include:

a. Operations and sustainment, to include system, subsystem, and item maintenance services, equipment, and support; planning, data collection, and PED support; and system and program support.
b. Logistics support.
c. Logistics technical data.
d. System performance assessments.
e. System, subsystem, and item acquisition, integration, and deployment.
f. System modification and modernization.
g. System deployment, relocation, and demobilization support.

For C5ISR platform fielded support operations, the contractor shall meet operational availability as defined in each TDL. Operational availability is a measure of logistics and maintenance performance, as is the percentage of hours that a system was available to perform missions compared to the total hours in the reporting period. The contractor shall also meet the Mission Tasking Ratio (MTR) as defined per TDL. MTR is a measure of operational performance and is the percentage of mission hours performed compared to mission hours assigned during the reporting period. The contractor shall track all variances between the mission hours tasked and the mission hours performed and shall provide reason for this deviation. The contractor shall provide an Operational Readiness Report (**Section F, Deliverable 36**).

The contractor shall obtain, install, configure, checkout, and maintain mission equipment, management infrastructure, decision support systems, sensors, and other related equipment. The contractor shall support sensor storage and provide maintenance and logistics processing. The contractor shall provide integration management so that software updates on one system will be updated throughout all affected systems. The contractor shall perform both scheduled and unscheduled maintenance on ancillary equipment to meet the requirements of specific TDLs. The contractor shall provide all parts, labor, and expertise necessary to complete required maintenance tasks. Maintenance downtime shall be coordinated between the contractor and COR or TPOC (per TDL). The contractor shall provide a timetable for scheduled maintenance and an estimated completion time for unscheduled maintenance. The contractor shall provide a Reliability Analysis Report (**Section F, Deliverable 37**), Maintenance and Logistics Plans (**Section F, Deliverable 38**), Maintenance and Logistics Reports (**Section F, Deliverable 39**), and Parts, Materials, and Ancillary Equipment Procurement Reports (**Section F, Deliverable 40**).

The contractor shall provide ancillary and temporary facilities to support the mission (e.g., temporary aircraft shelters, logistics enabling structures, shelters in place, distribution/support shelters, minor ancillary facilities). The contractor shall also provide any necessary services to maintain the ancillary, temporary facilities used to support TDLs.

During the execution of this TO, the contractor may be required to relocate or demobilize currently deployed assets. Relocation may be to a new or existing, improved or unimproved, forward operating location. Upon notification by the Government, the contractor shall submit a Relocation/Demobilization Plan (**Section F, Deliverable 41**) to include a budget and integrated master schedule. The contractor shall execute demobilization or assume full operations at the new location per the outlined timelines in the applicable TDL.

The contractor shall also provide Field Service Representative (FSR) support to CONUS and OCONUS locations. The contractor shall purchase, modify, track, update, integrate, ship, install, test, monitor, and maintain hardware, software, or firmware parts and materials required to support mission capability of fielded operational and training systems. Tasking includes new technology improvements and updates to fielded systems, subsystems, equipment, and components installed by contractor FSRs to include documenting all related procurement requirements. The contractor shall provide an FSR Plan (**Section F, Deliverable 42**) and FSR Status Report (**Section F, Deliverable 43**).

For specific efforts that result in ISR equipment transition from Contractor-Owned, Contractor-Operated (COCO) to Government-Owned, Contractor-Operated (GOCO), the contractor shall develop a Transition Plan (**Section F, Deliverable 44**) for the C5ISR capability and associated mission equipment, as well as personnel and Government-Furnished Information (GFI)/contractor-acquired property. The contractor shall include a detailed schedule for all actions in the Transition Plan. The contractor shall plan to de-install the sensors and other equipment and prepare the platform for relocation as required.

C.5.3.2 SUBTASK 3.2 – PROVIDE INTELLIGENCE PROCESSING, EXPLOITATION, AND DISSEMINATION (PED)

The contractor shall provide all-source intelligence PED and analysis for initiatives encompassing all military echelons from theater level to operational system. The contractor shall provide:

a. C5ISR and adversary defeat efforts through improving and performing vulnerability, kill-chain, countermeasure, and foundational analysis of systems.
b. Timely, accurate, relevant, complete, and actionable intelligence data and products to support decision making.
c. Intelligence based on all aspects supporting single-source and multi-source intelligence analysis, integration, production, and dissemination.
d. Tactics, Techniques, and Procedures (TTPs) that assist in executing intelligence requirements and documenting, tracking, and reporting throughout the intelligence lifecycle.
e. Multiple foreign language support to include, but not limited to, Korean, Mandarin, Russian, Tagalog, Persian, and Farsi.
f. Learning feedback mechanisms to refine contextual translation ability when dealing with phrases vice literal word-for-word translations.
g. Real-time object type analysis and classification into categorical typesets (e.g., person, vehicle, building) or at a further level of refinement.

The contractor shall provide support the entire PED life cycle on a continuous activity basis (analyze and assess). The contractor shall develop, staff, and maintain a stand-alone or integrated fused PED capability to support ISR platform collection operations that feed directly to a ground-based PED cell or Ground Control Station (GCS). The contractor shall analyze data after each mission and shall deliver a Consolidated Mission Results Report (**Section F, Deliverable 45**) to the Government as specified in the applicable TDL.

The contractor shall engage with analysts to determine intelligence needs, identify and develop possible collection postures and strategies, and convert these intelligence needs into collection requirements to satisfy intelligence requirements.

C.5.3.3 SUBTASK 3.3 – PROVIDE INTELLIGENCE PLANNING SUPPORT

The contractor shall communicate, organize, assess, and monitor the determination, organization, and prioritization of intelligence collection requirements.

The contractor shall integrate requirements across tactical, operational, and strategic levels of operations that include direct support to the planning and operations staff to identify capabilities, limitations, and potential vulnerabilities of enemy forces. The contractor shall provide intelligence products and disseminate to component units, interagency, governmental organizations, and partner nation forces upon approval from the TPOC.

The contractor shall verify that collection requirements listed on incoming Intelligence Information Reports (IIR) are appropriate for the information provided in the reports. The contractor shall work with the command's intelligence analyst to track source reporting against Priority Intelligence Requirements (PIRs), Essential Elements of Information (EEI), and source-directed requirements. The contractor shall draft procedures (for TPOC approval) for rapid dissemination of threat-related or actionable information in support of operations, Time-Sensitive Targeting (TST), and time-sensitive collection requirements. The contractor shall review and expedite publication of IIRs, coordinate with analysts, and facilitate source validation and report validation. The contractor shall provide an Intelligence Collection Analysis Report (**Section F, Deliverable 46**).

The contractor shall maintain liaison with the intelligence collection requirements managers throughout the joint force.

C.5.4 TASK 4 – PROVIDE TRAINING

The contractor shall provide training for the operation of C5ISR systems and subsystems including classroom and on-the-job training at Government and contractor sites. The contractor shall also provide warfighting domain-based training for sensor operators, maintainers, analysts, and operations crew members. The contractor shall provide training to both Government and non-Government personnel, as well as training specifically developed for approved foreign nationals. The contractor shall also assist the Government in transitioning the training courses to Government management, as applicable.

The contractor shall develop and provide Training Plans (**Section F, Deliverable 47**) training documentation, materials, manuals, and coordinate and provide demonstrations, exercises, operational systems training, and mission training. For operational systems training, the contractor shall address operator and/or maintainer interfaces with the system, including normal and degraded modes of operation in order to ensure users' ability to operate the subject systems. For mission training, the contractor shall include the operating environment, threats, political concerns, and special operating considerations. The contractor shall document test results, lessons learned, and recommendations in Test Results Reports (**Section F, Deliverable 48**).

The contractor shall provide Training Platforms (**Section F, Deliverable 49**) to support the training and mission objectives. Training platforms shall include the ability to modify sensors, antennas, onboard mission equipment, intelligence and PED systems, and ancillary systems for mission training.

C.5.5 TASK 5 – PROVIDE CYBER SECURITY AND INFORMATION ASSURANCE (IA) SUPPORT

The contractor shall provide cybersecurity and IA services to support C5ISR activities. The contractor shall provide technological responses that prevent, detect, and respond to cyber threats and conduct research and analysis of actionable cyber threats requiring a rapid response. The contractor shall support all IA officer responsibilities in accordance with the DoD Special Access Program (SAP) PM Handbook to the Joint SAP Implementation Guide and the Risk Management Framework (RMF) and the IC Directive (ICD) 503, IC Information Technology Systems Security, Risk Management, Certification, and Accreditation. The contractor shall provide IA support to the Government for classified activities, establish and maintain accreditation for all information systems or equipment operating within a classified environment, and develop and maintain System Security Plans outlining security operating procedures. All services provided by the contractor shall be in accordance with all applicable DoD cyber security policies and standards.

The contractor shall transmit mission data to the Government's technology partners to validate data results and make appropriate updates to the software following cybersecurity coding standards. The contractor shall provide the appropriate infrastructure to receive software updates and software patches necessary to maintain operability of mission sensors. The contractor shall follow IA policies necessary to maintain the integrity of proprietary software and source code from Government technology partners.

The contractor shall develop a Cybersecurity Plan (**Section F, Deliverable 50**), Security Assessment Report (SAR) (**Section F, Deliverable 51**), and Plan of Actions and Milestones (POA&M) (**Section F, Deliverable 52**) in collaboration with the Government. These documents shall be incorporated with a Risk Assessment Report (**Section F, Deliverable 53**) into a Security Authorization Package (**Section F, Deliverable 54**), which shall provide the Authorizing Official (AO) with the essential information needed to make a risk-based decision as to whether systems are able to meet the requirements for granting Authority to Operate (ATO).

The contractor shall develop a Cybersecurity Strategy (**Section F, Deliverable 55**) in collaboration with the Government. The Cybersecurity Strategy shall be an iterative document that reflects both the program's long-term approach to, as well as its implementation of, cybersecurity throughout the program life cycle.

The contractor shall provide day-to-day security management and oversight for classified activities performed by contractor personnel, including maintaining sensitive documents, data, and equipment; performing routine data updates and required security patches; and providing monthly reports on security updates and patching activities. The contractor shall maintain continuous control and accountability of all hardware and software operated and maintained by the contractor that is entered into and removed from classified facilities and shall provide an inventory report for all Communications Security (COMSEC), hardware, and software. The

contractor shall assist the Government with developing sanitation and secure data extraction programs for all media, security incident cleanup plans, system certification testing plans, vulnerability testing, and protection measure procedures. The contractor shall identify requirements for fielding and supporting encryption and cryptologic equipment and keys for classified networks. The contractor shall provide System Vulnerability Assessment Reports (**Section F, Deliverable 56**).

The contractor shall conduct Computer Network Defense (CND) for classified and unclassified networks and support the Government with the establishment, operations, and maintenance of CND environment(s) for applicable C5ISR solutions and systems.